AMENDMENTS TO THE SPECIFICATION:

Please amend the heading beginning at page 1, line 10, as follows:

BACKGROUND ~~ART~~

Please amend the heading beginning at page 1, line 29, as follows:

SUMMARY ~~OF THE INVENTION~~

Please amend the paragraph beginning at page 2, line 5, as follows:

This need is addressed by the ~~present invention~~ technology described herein in that it provides a method for processing a received electromagnetic signal in the microwave range, with the signal comprising at least a first and a second carrier wave at respective first and second carrier frequencies. ~~The~~ A method comprises splitting the received signal into a first and a second branch, and a first shifting of the carrier frequency of the signal in each of the branches by respective first frequency shifts, and also filtering the signal in the first and the second branch in respective first filters.

Please amend the paragraph beginning at page 2, line 26, as follows:

Thus, ~~by means of the invention,~~ the frequency separation between the first and second carrier waves can be set by those designing the system.

Please amend the paragraph beginning at page 2, line 29, as follows:

In a particularly preferred but still example embodiment, the signals in the two branches are combined after the second frequency shifts, and then filtered and further processed.

Please delete the paragraph beginning at page 3, line 2, which starts with:

The invention will be...

Please amend the paragraph beginning at page 3, line 4, as follows:

Fig 1 shows a block diagram of a first non-limiting, example embodiment ~~of the invention~~, and

Please amend the paragraph beginning at page 3, line 5, as follows:

Fig 2 shows a block diagram of a version of the first embodiment ~~of the invention~~, and

Please amend the paragraph beginning at page 3, line 7, as follows:

Fig 3 shows a block diagram of a second non-limiting, example embodiment ~~of the invention~~, and

Please amend the paragraph beginning at page 3, line 8, as follows:

Fig 4 shows a block diagram of a version of the second embodiment ~~of the invention~~.

Please amend the heading beginning at page 3, line 11, as follows:

~~EMBODIMENTS~~ DETAILED DESCRIPTION

Please amend the paragraph beginning at page 3, line 12, as follows:

Fig 1 shows a schematic block diagram of a first non-limiting, example embodiment 100. ~~of the present invention. The invention will throughout be described as a~~ A multi-carrier signal is

described below as comprising two signals, but it will be appreciated by those skilled in the field that ~~the invention can be applied to~~ a multi-carrier signal comprising a more or less arbitrary amount of carriers may be used. Thus, the two-carrier signal is only used as an example for the sake of clarity, and should not be seen as a restriction ~~of the scope of the invention, which can be applied to a signal comprising more or less any amount of carriers~~.

Please amend the paragraph beginning at page 3, line 21, as follows:

A multi-carrier signal microwave frequency signal, preferably within a cellular telephony system employing WCDMA-technology, is received at an antenna 110. The signal comprises two carrier signals, at a first f_1, and a second f_2 carrier center frequency with a frequency separation between them referred to as Δf_{RF}. ~~According to the invention, the~~ The received signal is split into a first 120 and a second 125 branch, so that the signal can be processed separately in each of the branches.

Please amend the paragraph beginning at page 3, line 29, as follows:

In each of the two branches, the signal is subjected to a first frequency shift by ~~means of~~ multiplication with the signal from a local oscillator, LO, one LO per branch, referred to as LO_1, 126, and LO_2, 127, with respective signals f_{LO1}, and f_{LO2}. The signal in the first branch is thus shifted by a shift of f_{LO1}, and the signal in the second branch by a shift of f_{LO2}.

Please amend the paragraph beginning at page 4, line 4, as follows:

One of the features of the example embodiment ~~of the invention~~ shown in Fig 1 is that there is a frequency distance between the two LO:s, the difference being such that after the first frequency

shift, the center frequency of the first carrier in the first branch is essentially the same as that of the center frequency of the second carrier in the second branch. This is also illustrated in fig 1 by ~~means of~~ smaller drawings.

Please amend the paragraph beginning at page 4, line 15, as follows:

One of the ~~ideas behind~~ features of this embodiment ~~of the invention~~ will now become evident: since, at this stage in the signal processing, the center frequency of the first carrier wave on the first branch is essentially the same as that of the second carrier in the second branch, the bandpass filters in the first and the second branch can have the same pass band, or filter characteristics. This will thus result in a signal in the first branch which essentially comprises only the first carrier wave, and in the second branch in a signal which essentially comprises only the second carrier wave.

Please amend the paragraph beginning at page 5, line 13, as follows:

Thus, following the second frequency shifting in the two branches, the first carrier wave and the second carrier wave are now separated by Δ_{IF}. Suitably, the signals in the two branches are now combined into one branch~~[[,]]~~ by ~~means of~~ a combining element 140.

Please amend the paragraph beginning at page 5, line 23, as follows:

Suitably, the frequency separation Δ_{IF} between the two carriers at this stage is adapted to the capacity of the ADC-circuit 145 used. In fact, this ~~can be said to be~~ is another advantage of the ~~present invention~~ technology described herein: ~~the invention~~ enables the use of simpler ADC:s, since the choice of frequency separation can be "tailored" to the ADC.

Please amend the paragraph beginning at page 5, line 29, as follows:

In addition, as a further advantage ~~of the invention~~, only one ADC needs to be used, although there can be a plurality of carrier waves in the received signal. However, if it is for some reason desired not to do so, the signals in the two branches not need be combined after the second frequency shift, this is merely a preferred example embodiment ~~of the present invention~~.

Please amend the paragraph beginning at page 6, line 7, as follows:

In fig 2, a more detailed diagram of a possible example embodiment of the device from fig 1 is shown: The main difference between the example embodiments of fig 1 and fig 2 is that the example embodiment of fig 2 utilizes diversity reception, i.e. two antennas are used to receive the signal, with the signal comprising a plurality of carrier wave signals, in the example shown two such carrier waves. The circuit solution used in the case of two antennas and diversity reception can be essentially the same, so that the signal from each of the antennas is processed by circuits that are similar to each other.

Please amend the paragraph beginning at page 7, line 10, as follows:

In fig 3, another example embodiment 300 ~~of the present invention~~ is shown: in similarity to the embodiment shown in fig 1, the device of fig 3 receives a signal from an antenna 310, preferably a signal in the microwave range, and the device is especially useful in cellular telephony systems of the WCDMA-type.

Please amend the paragraph beginning at page 10, line 1, as follows:

Regarding the embodiments shown in figs 3 and 4, it should be pointed out that in an alternative embodiment ~~of the invention~~, the second frequency shifting could be omitted altogether.